

FIG. 4E so as to increase the rotation at desired acceleration. A motor speed FIG. 4G increases at fixed acceleration as shown in FIG. 4G. When the motor speed FIG. 4G arrives at a desired value  $W_0$  (time  $t_1$ ), rotational speed control is applied in order to keep the fixed speed.

An interval between time  $t_0$  and  $t_1$  is called start interval (a start time interval is  $T_s$ ). Shift to the fixed speed state is conducted on the basis of the speed information fed from the speed detector 21, and error command information FIG. 4A is supplied to the motor drive circuit 24. As a result, the motor current changes, resulting in a fixed speed state.

Replace the paragraph bridging pages 4 and 5 with the following text:

When the control signal FIG. 4B is detected in the fixed speed interval (at, for example,  $t_5$ ), the speed  $W_0$  is kept further for a time interval ( $T_D$ ) on the basis of tracking information, and then shift to braking operation is conducted (time  $t_2$ ). The braking operation is conducted by supplying forward/reverse rotation command information FIG. 4D to the motor drive circuit 24 and switching the motor current over to an opposite direction. At this time, the motor current FIG. 4F is prescribed (to become  $I_B$  in FIG. 4F) by the current limit value command information FIG. 4E so as to decrease the rotational speed of the motor at a fixed rate. If braking operation were kept, the motor would conduct reverse rotation operation after stop. The moment an opposite direction rotation detection output (reverse rotation detection signal FIG. 4C is obtained from the rotation direction detector 22 (at time  $t_3$ ), therefore, the forward/reverse rotation command FIG. 4D is changed so as to order a forward rotation. At the same time, a current is applied in the forward rotation direction again for a short time in order to cancel the rotational inertia of the motor. As a result, rotatory power of the forward rotation direction is generated. The reverse rotation energy is thus absorbed completely, and complete stop is obtained. This is so-called re-acceleration. A re-

acceleration time interval is  $TR$ , which is an interval between  $t_3$  and  $t_4$ . (As a matter of fact, the motor is in the stop state.)

Replace the title on page 7, line 2, with the following text:

#### SUMMARY OF THE INVENTION

Page 8, before the paragraph beginning at lines 7-9, insert

A more complete appreciation of the invention and many of the attendant advantages thereof will be readily obtained as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings, wherein:

Replace the paragraph on page 8, lines 14-15, with the following text:

FIGS. 4A-4G are timing charts showing operation of the related technique of FIG. 3.

Replace the title on page 8, line 16, with the following text and added paragraph:

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Other features of the invention will become apparent in the course of the following descriptions of exemplary embodiments which are given for illustration of the invention and are not intended to be limiting thereof.

Replace the paragraph on page 8, lines 17-22, with the following text:

Hereafter, an embodiment of the present invention will be described in detail by referring to drawing. Referring now to the drawings, wherein like reference numerals designate identical or corresponding parts throughout the several views, and more particularly to Figure 1 thereof, Fig. 1 is a block diagram showing an embodiment of an intermittent drive control apparatus of a motor according to the present invention. In FIG. 1, the same components as those of FIG. 3 are denoted by like characters.